

ELECTRICAL TRANSIENT PROTECTION CIRCUIT

Abstract of the Disclosure

An electrical transient protection circuit in a vehicle includes an input connector, which receives an input voltage, a means for absorbing, which is electrically connected to the input connector, and a means for blocking, which is electrically connected to the input connector. At least one of the means for absorbing and the means for blocking conditions the input voltage by suppressing a voltage transient and producing a corresponding output voltage. The voltage transient is up to i) about 8 times the input voltage through a source impedance of about 0.4Ω for about 0.5 seconds, ii) about 50 times the input voltage through a source impedance of about 20.0Ω for about 1.0 millisecond, and iii) about 50 times a negative of the input voltage through a source impedance of about 20.0Ω for about 1.0 millisecond. An output connector delivers the output voltage, which is about 110% of the input voltage, to an electrical component on the vehicle.